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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,366	07/26/2001	Man Soo Choi	YPLEE7.001AP	1934

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EXAMINER	
HOFFMANN, JOHN M	

ART UNIT	PAPER NUMBER
1731	

NOTIFICATION DATE	DELIVERY MODE
06/07/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/890,366	CHOI ET AL.	
	Examiner	Art Unit	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,10-14 and 17-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,10-14 and 17-31* is/are rejected.

7)☒ Claim(s) *24-31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/26/2007 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 10-14, and 17-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Examiner could find no support for the newly claimed limitation that the wavelength is selected so as to be coincident with the aggregates – either explicit or implicit. Further page 10, line 8 of the specification indicates the wavelength is 514 nm,

while page 14, line 30 suggests the aggregate is only 70 nm. 514 nm is NOT "generally coincident" with 70 nm.

Moreover, there is no indication that the wavelength was selected in the manner claimed. Given that applicant's C02 laser is of a rather standard type, the less unreasonable assumption would be that applicant selected the aggregate size (or some other parameter) to coincide with the wavelength. (The Office's use of the phrase "less unreasonable" is NOT to be construed as an indication that such is in any way "reasonable.")

There is also no support for the limitation that the laser beam is generally absorbed by said aggregates but not with the gas. Page 12, lines 2-5 of the specification clearly discloses there is some absorption by the gas. Also figures 5-6 clearly show that the laser is not absorbed.

This is deemed to be a prima facie showing on failure to comply with the requirement. The burden is now on Applicant to show the requirement is complied with, or to amend the claims so that they comply.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 10-14, and 17-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The independent claims indicate that the laser beam is "selected". This reads on a nebulous mental step conducted prior to the manipulative steps of the claimed process, hence rendering the present process claim unclear in meaning in scope. If applicant wishes to patent detail controls over the recited process, the process steps must be posititvely recited. See *Seagram & Sons Inc. vs Marzall, 84 USPQ 180*.

To look at it another way: it is unclear if one of ordinary skill can avoid infringement by merely choosing applicant's wavelength for some other reason, for example – to make lots of money.

It is also unclear what is meant by a wavelength being "coincident" with aggregates. This does not appear to be described in the specification – and it does not appear that one of ordinary skill could understand what is meant. As pointed out above, the specification seems to lack support for this limitation. Since it could be (rather than lack of support) that Examiner may just fail to understand what applicant means by "coincident", it is presumed that one of ordinary skill would likely also understand what is meant.

The new absorption limitations are indefinite because whereas they require the laser is not absorbed by the gas, claims 25, 27, 29 and 31 indicate that there is a 40 degree increase in temperature. First, it is not understood how there could be 40 temperature change, but still have no absorption as required by the dependent claims.

Second it is unclear relative to what the absorption is "realively small" (claims 24, 26, 28 and 30).

The language "generally absorbed" is a word of degree" which is imprecise unless a definition or guideline has been set forth in the specification or the term is otherwise well known in the art. See Seattle Box Co. v. Industrial Crating and Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984). However, there is no evidence in application (nor is Examiner aware of any evidence) that the words "generally absorbed" have any art-recognized meaning. Nor is there any guidance or definition in the specification that would allow one of ordinary skill in the art to understand the meaning of the words "generally absorbed".

Claim Objections

Claims 24-31 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

The independent claims require that the laser beam is not absorbed by the gas, but claims 24, 26, 28 and 30 require "relatively small" absorption by the gas. These are two mutually exclusive conditions. Claims 24-31 do not further limit the claims, rather they take the claims to a mutually exclusive scope – from one of no absorption by the gas to a scope where it there is absorption. Both conditions cannot be met. Claims 24-31 are not further treated on their merits.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

The prior art arguments regarding claims 1, 10-14 and 17-20 are convincing. However as per the above rejections, such should not be construed as an indication of allowable subject matter. '

It is argued that Applicants teach the principle of the newly added claim language at page 11, line 25 to page 12, line 13; applicant reproduces this passage in the present response. It is noted that the Office's copy of the specification is not identical to applicant's reproduced version. Nonetheless, neither version discloses the concept that the laser beam is generally absorbed by the aggregates, but not by the gas – for the reasons given above. On the contrary, this passage reasonably shows that there is absorption by the gas.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Hoffmann
Primary Examiner
Art Unit 1731

6-4-01

jmh